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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/640,952	08/17/2000	Michael S. Kinch	3220-66872	3252

26813 7590 06/17/2005

MUETING, RAASCH & GEBHARDT, P.A.
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MINNEAPOLIS, MN 55458

EXAMINER

CANELLA, KAREN A

ART UNIT	PAPER NUMBER
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1642

DATE MAILED: 06/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/640,952

Applicant(s)

KINCH ET AL.

Examiner

Karen A. Canella

Art Unit

1642

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-13,21,23,24,33,36,37,41-47,49-56,59-68,72,73,75-81 and 90-101 is/are allowed.
- 6) ☒ Claim(s) 69 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date March 15, 2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

AS

DETAILED ACTION

1. Sections of Title 35, U.S. Code not found in this action can be found in previous action.

2. Claims 1, 3-13, 21, 23, 24, 33, 36, 37, 41-47, 49-56, 59-69, 72, 73, 75-81, 90-101 are under consideration.

3. The rejection of claim 69 under 35 U.S.C. 103(a) as being unpatentable over Easty et al (International Journal of Cancer, 1995, vol. 60, pp. 129-136) and the abstract of Chen et al (Journal of Biological Chemistry, 1998, Vol. 273, pp. 24670-24675) in view of Easty et al (International Journal of Cancer, 1997, Vol. 71, pp. 1061-1065) is maintained for reasons of record.

Claim 69 is drawn to a method for detecting the presence of metastatic cells in a cell population comprising incubating at least a portion of the cell population with a first antibody that specifically binds to EphA2 to allow binding of the antibody to EphA2, detecting antibody-EphA2 binding, incubating the portion of the cell population with a second antibody having phosphotyrosine specificity and observing the level of binding of the second antibody to cells in the cell population, wherein the presence of metastatic cells in the cell population is indicated by an alteration in binding of one or both of the first or second antibodies compared to the binding of said first or second antibodies to cells in an analogous normal cell population.

The abstract of Chen et al discloses that EphA2 is synonymous with Eck.

Easty et al teach a method for detecting metastatic melanoma cells in a cell population comprising the steps of lysing at least a portion of the cell population, incubating the lysed cells with a polyclonal antibody that specifically binds to Eck to allow antibody binding to Eck and detecting antibody-Eck binding by Western blot methodology using chemiluminescence as a detectable label (page 131, under the heading "Immunoblotting analysis"). Easty et al teach the detection of Eck protein by means of a polyclonal antiserum specific for Eck (page 131, first column, lines 10-12). The antiserum referenced by Easty et al was made by Lindberg et al against a fusion protein comprising amino acids 874-974 of Eck which comprises an intracellular domain of Eck.

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Easty et al (1997) teaches that in addition to Eck, other protein tyrosine kinases are ectopically expressed in melanoma include Her2, Fgf-R4, Hek2, Tie, Tyro-9 and 10 and Axel (page 1061, first column, second full paragraph under the abstract, and title). Easty et al teach that the expression of the tyrosine kinases Ptk7 and Sek is lost in malignant melanoma. and that the expression of Kit and Tyro-3 is also decreased during melanoma progression but that Kdr and Met can be either increased or decreased in melanomas (page 1061, second column, lines 5-12).

It would have been prima facie obvious to one of skill in the art at the time the invention was made to use an antibody which would specifically bind another protein tyrosine kinase that was known to be ectopically expressed in malignant melanoma. or was known to have lost expression in malignant melanoma. One of skill in the art would have been motivated to do so by the teachings of Easty et al (1997) which indicate that the measurement of a single protein tyrosine kinase does not provide an absolute correlation with malignancy because while the trend is loss of tyrosine kinase expression, some tyrosine kinases are over expressed in some cell lines and lost in other cells lines (page 1061, second column, lines 5-12). Thus, one of skill in the art would be motivated to measure the expression of more than one tyrosine kinase known to be extopically expressed, lost, or over-expressed in malignant melanoma.

4. Applicant argues that the examiner has misunderstood the meaning of phosphotyrosine antibodies and argues that the claim was meant to encompass antibodies which bound to phosphotyrosine residues in a context-independent manner. While the broadest interpretation of the claim would include the use of such antibodies, the recitation of "an antibody having phosphotyrosine specificity" does not exclude the use of antibodies which bind to phosphotyrosine residues in a context-dependent manner.

5. All other rejections and objections are withdrawn.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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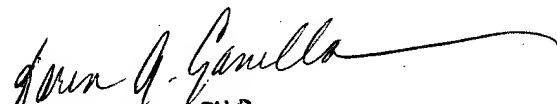
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen A. Canella whose telephone number is (571)272-0828. The examiner can normally be reached on 10 a.m. to 9 p.m. M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Siew can be reached on (571)272-0787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karen A. Canella, Ph.D.

6/13/2005


KARENA CANELLA PH.D.
PRIMARY EXAMINER

Continuation of Disposition of Claims: Claims pending in the application are 1,3-13,21,23,24,33,36,37,41-47,49-56,59-69,72,73,75-81 and 90-101.